

2/

20. (Twice Amended) Method for cutting flat material comprising the steps of:

B2  
cancel

rotating a pinless product folding cylinder about an axis of rotation, said product folding cylinder having a surface supporting an incoming material;  
cooperatively rotating a cutting cylinder with said product folding cylinder, said cutting cylinder having knife assemblies mounted thereon; and  
moving at least one cyclically engageable product seizing element, assigned to at least one of said product folding cylinder and said cutting cylinder, opposite a sense of rotation of said product folding cylinder for engaging a respective next product's front portion after a cutting operation.

#### REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 1-21 remain pending in the application.

On page 2 of the Office Action, the Examiner has indicated that, despite Applicant's Response to the Election of Species filed March 2, 1999 identifying claims 1-14 and 17-21 as reading on the elected species of Figures 1-3, claims 3, 6, 10, 17 and 21 are not readable on the elected species. As a result, these claims were not examined on their merits. The position taken by the Examiner is respectfully traversed, because a "hold down" device such as that recited in claim 3 encompasses the exemplary sponge pad 8 of Figure 1, and Figure 1 constitutes the elected species. However, this point is deemed moot because the independent claims presently pending are considered to encompass both the elected species and the non-elected species. Upon the allowance of the generic claims, allowance of the non-elected claims is requested.

Turning to the substantive rejection in the Office Action, claims 1-2, 4-5, 7-8 and 20 are rejected on pages 2-3 of the Office Action under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,185,088 (Goss et al.). In the last paragraph on page 3 of the Office Action, claims 18-19 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,900,288 (Jordhoy). On pages 4-5 of the Office Action, the remaining

dependent claims are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Goss patent considered either individually or in combination with U.S. Patent No. 629,928 (Seymour). These rejections are respectfully traversed. Applicant's invention, as encompassed by independent claims 1 and 18-20, patentably distinguishes over the patents relied upon by the Examiner. For example, none of these patents considered individually or in the various combinations relied upon by the Examiner, teach or suggest a pinless folding apparatus having the features recited in Applicant's independent claims 1 and 18-20.

Exemplary embodiments of the present invention are directed to eliminating the use of tapes in pinless applications while maintaining product contact. By providing a pinless application, pinholes which are unappealing in the product can be eliminated, and paper savings can be realized. Exemplary embodiments avoid the disadvantages of conventional pinless folders while maintaining exact signature register subsequent to various operations, such as cutting operations.

In accordance with the exemplary embodiments of the present invention, product seizing elements are arranged on a product guiding cylinder or on, for example, a cutting cylinder's surface. The product seizing elements include a transmission system whereby the product seizing elements move opposite to the sense of rotation of a cylinder such as a product guiding cylinder and then engage a next product's front portion subsequent to, for example, a cutting operation.

The foregoing features and advantages are encompassed by Applicant's independent claim 1 which relates to a product cutting device. Applicant's claim 1 combination includes, among other features, a pinless product folding cylinder, a cutting cylinder and at least one cyclically engageable product seizing element assigned to at least one of said product folding cylinder and cutting cylinder, and being movable opposite to a sense of rotation of said product folding cylinder for engaging a next product's front portion after a cutting operation. The remaining independent claims 18-20 include similar features.

Such features are neither taught nor suggested by the patents relied upon by Examiner in the Office Action. The Goss patent is not directed to a pinless apparatus, but

instead discloses a cutting and folding machine having impaling pins. As shown in Figure 1 of Goss, for example, a web of material is cut by cylinders 60 and 64. Impaling pins 68 and 69 mounted in cylinder 64 are used to impale the cut sheets in order to retain the forward edge of the cut web. As such, the Goss patent fails to teach or suggest a pinless product folding cylinder rotating about an axis of rotation and having a surface supporting an incoming material, as recited in independent claims 1 and 18-20.

The Jordhoy patent, relied upon in the rejection of independent claims 18 and 19, fails to overcome the deficiencies of the Goss patent described above. The Jordhoy patent does not teach or suggest a pinless apparatus, but rather discloses a folding cylinder that utilizes an impaling pin in order to capture a cut web. As illustrated in Figure 1, Jordhoy describes a pin arm 55, holder 56 and pin point 57 that are able to impale a web. Accordingly, the Jordhoy patent, like the Goss patent, fails to teach or suggest a pinless product folding cylinder rotating about an axis of rotation and having a surface supporting an incoming material.

As such, Applicant respectfully submits that independent claims 1 and 18-20 are allowable over the Goss and Jordhoy patents. Additionally, the Seymour patent was relied upon in the rejection of dependent claims 9, 11 and 12. This patent is directed to a folding machine having a gripping jaw described in detail on page 2 (left hand column, lines 25-50). The gripping jaw, however, is used for the purpose of clamping the fold of the sheet (see page 2, left hand column, lines 20-22) and not for engaging a front portion of a product. As such, there would have been no motivation or suggestion to have combined features of the Seymour patent with features of the Goss or Jordhoy patent as suggested by the Examiner. Moreover, the Seymour patent fails to overcome the deficiencies of the Goss and Jordhoy patents. For example, the Seymour patent fails to teach or suggest a pinless apparatus wherein at least one cyclically engageable product seizing element is moved opposite a sense of rotation of a product folding cylinder for engaging a respective next product's front portion, as recited in independent claims 1 and 18-20.

As such, Applicant's independent claims 1 and 18-20 are allowable. The remaining claims depend from the aforementioned independent claims and recite additional advantageous features which further distinguish over the patents relied upon by the Examiner. As such, these claims are also allowable.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: Patrick C. Keane Reg. No. 41,467  
for Patrick C. Keane  
Registration No. 32,858

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620

Date: June 29, 1999